segmenting the data to generate a plurality of ATM cells;

buffering the plurality of ATM cells in a memory device;

traffic shaping the buffered plurality of ATM cells; and

transmitting the plurality of ATM cells on a network.

4. (Amended) The method of claim 1 wherein the traffic shaping of data is performed by the central processing unit (CPU) of a computer.

5. (Twice Amended) A program storage device readable by a machine, tangibly embodying a program of instructions executable by a machine to perform method steps for segmenting asynchronous transfer mode (ATM) data, the program comprises:

a first code section to instruct a CPU of a personal computer to segment data to generate a plurality of ATM cells, the first code section including segmentation instructions implemented in the CPU to perform the operation of segmenting data;

a second code section to buffer the plurality of ATM cells in a memory device; and

a third code section to traffic shape the buffered plurality of ATM cells.

7. (Unamended) The program storage device of claim 5 wherein the program further comprises:

a fourth code section to compute a new partial cyclic redundancy check used to protect against bit errors.

8. (Unamended) The program storage device of claim 5 wherein the program includes instructions to pad ATM cells which are not complete.

9. (Twice Amended) A method comprising:

performing asynchronous transfer mode (ATM) reassembly functions with a segmentation and reassembly (SAR) software module implemented in a central processing unit (CPU) of a personal computer including,

receiving in an uninterrupted stream a plurality of protocol data units without interrupt in an input buffer, each protocol data unit including a plurality of ATM cells; and

retrieving ATM cells from the input buffer until all data corresponding to a payload data unit is retrieved and checking a CRC to determine whether data was received without error.

10. (Unamended) The method of claim 9 further comprising:
dropping the payload data unit when the CRC indicates an error.

11. (Unamended) The method of claim 9 further comprising:
copying a cell payload from the input buffer into a reassembly buffer.

12. (Unamended) The method of claim 11 further comprising:
calculating a new partial CRC corresponding to the cell payload.

13. (Unamended) The method of claim 11 further comprising:
determining whether the cell payload includes an end of payload data unit marker; and
copying a second cell payload from the input buffer into the reassembly buffer when retrieved cell payload does not include the end of payload data unit marker.

14. (Twice Amended) A program storage device readable by a machine tangibly embodying a program of instructions executable by a machine to perform method steps for reassembly of ATM data, the program comprising:
instructions readable by a CPU of a personal computer to instruct the CPU to reassemble ATM data, the instructions including reassembly instructions implemented in the CPU to perform the operation of the reassembly of data further including,
a first code section to receive a stream including a plurality of protocol data units without interrupt in an input buffer, each protocol data unit including a plurality of ATM cells.

15. (Unamended) The program storage device of claim 14 further comprising:

a second code section to retrieve ATM cells from the input buffer until all data corresponding to a payload data unit is retrieved and checking a CRC to determine whether data was received without error.

16. (Amended) The program storage device of claim 14 further comprises:

a third section to copy a cell payload from the input buffer into a reassembly buffer.